

US009699613B2

(12) **United States Patent**  
**Chang et al.**

(10) **Patent No.:** **US 9,699,613 B2**  
(45) **Date of Patent:** **Jul. 4, 2017**

(54) **SYSTEM FOR MEMORIZING OBJECT LOCATION AND METHOD THEREOF**

(71) Applicants: **INVENTEC APPLIANCES (PUDONG) CORPORATION**, Shanghai (CN); **INVENTEC APPLIANCES (SHANGHAI) CO., LTD.**, Shanghai (CN); **INVENTEC APPLIANCES CORP.**, New Taipei (TW); **INVENTEC APPLIANCES (NANCHANG) CORPORATION**, Jiangxi (CN)

(72) Inventors: **Ching Sung Chang**, New Taipei (TW); **Dai-Shui Ho**, New Taipei (TW); **Xue-Jiao Zhang**, Jiangxi (CN)

(73) Assignees: **Inventec Appliances (Pudong) Corporation**, Shanghai (CN); **Inventec Appliances (Shanghai) Co., Ltd.**, Shanghai (CN); **Inventec Appliances Corp.**, New Taipei (TW); **Inventec Appliances (Nanchang) Corporation**, Jiangxi (CN)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 232 days.

(21) Appl. No.: **14/306,107**

(22) Filed: **Jun. 16, 2014**

(65) **Prior Publication Data**  
US 2015/0168533 A1 Jun. 18, 2015

(30) **Foreign Application Priority Data**  
Dec. 16, 2013 (CN) ..... 2013 1 0689922

(51) **Int. Cl.**  
**H04Q 5/22** (2006.01)  
**H04W 4/02** (2009.01)  
(Continued)

(52) **U.S. Cl.**  
CPC ..... **H04W 4/025** (2013.01); **H04W 4/008** (2013.01); **G06K 7/10009** (2013.01)

(58) **Field of Classification Search**  
CPC ..... H04W 4/008; H04W 4/025; H04W 4/028; H04W 4/043; H04W 64/00; H04N 5/232;  
(Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

7,378,968 B2 \* 5/2008 Wang ..... G01S 5/0018  
340/539.13  
7,468,650 B2 \* 12/2008 Childress ..... G06K 17/00  
340/5.92

(Continued)

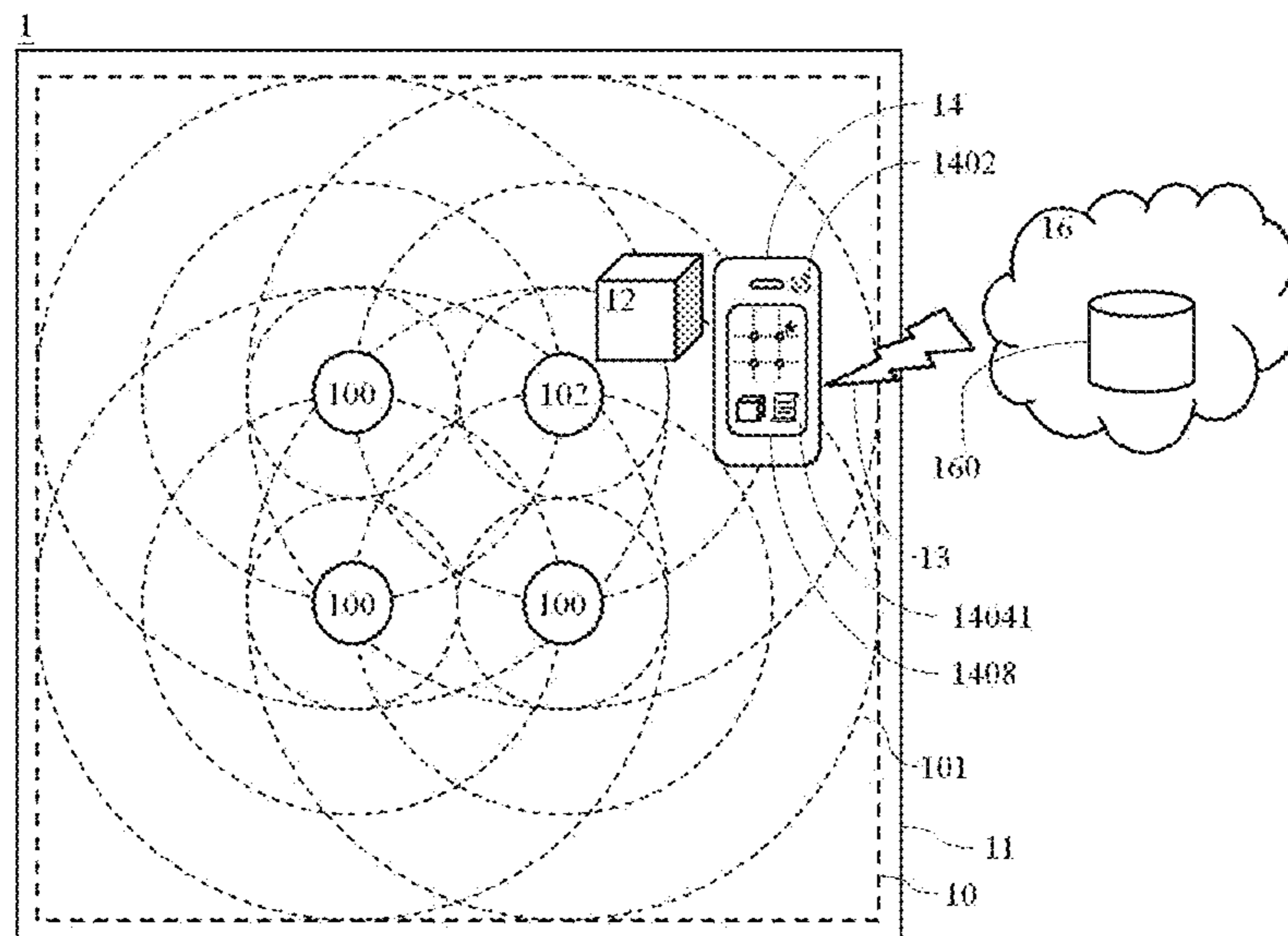
Primary Examiner — Adnan Aziz

(74) *Attorney, Agent, or Firm* — Muncy, Geissler, Olds & Lowe, P.C.

(57) **ABSTRACT**

A system for memorizing object location, for detecting an object storage position, includes: a wireless sensor module disposed in an interior space to generate a wireless sensor signal; a mobile device having an application program to start and initialize the wireless sensor module, the application program having a function of using the wireless sensor signal to calculate out a positioning data, and producing an object position integration information; and a cloud storage server connected to the mobile device via a communication link to receive the object position integration information and store the information in an object position memorizing database.

**17 Claims, 8 Drawing Sheets**



- |  |   |
|--|---|
| <p>(51) <b>Int. Cl.</b><br/> <i>H04W 4/00</i> (2009.01)<br/> <i>G06K 7/10</i> (2006.01)</p> <p>(58) <b>Field of Classification Search</b><br/> CPC ..... H04L 67/10; G01S 1/68; G01S 5/0018;<br/> G01S 5/02; G01S 5/021; G01S 5/0252;<br/> Y02B 60/50<br/> USPC ..... 340/10.1, 539.13, 572.1, 825.49<br/> See application file for complete search history.</p> <p>(56) <b>References Cited</b><br/> U.S. PATENT DOCUMENTS</p> <p>7,941,159 B2 * 5/2011 Walley ..... G01S 5/0252<br/> 455/404.2<br/> 8,639,184 B2 * 1/2014 Eruchimovitch ..... G01S 5/0221<br/> 455/404.1<br/> 8,983,491 B2 * 3/2015 Hiltunen ..... H04W 64/00<br/> 340/539.11<br/> 2004/0095276 A1 * 5/2004 Krumm ..... G01S 5/0252<br/> 342/465</p> | <p>2004/0152471 A1 * 8/2004 MacDonald ..... G01S 5/0252<br/> 455/456.1<br/> 2005/0261004 A1 * 11/2005 Dietrich ..... G01S 5/02<br/> 455/456.2<br/> 2006/0055530 A1 * 3/2006 Wang ..... G01S 5/02<br/> 340/539.13<br/> 2006/0265664 A1 * 11/2006 Simons ..... A62B 99/00<br/> 715/772<br/> 2007/0060098 A1 * 3/2007 McCoy ..... G01S 5/0289<br/> 455/404.2<br/> 2007/0127422 A1 * 6/2007 Belcea ..... H04W 64/00<br/> 370/338<br/> 2007/0247366 A1 * 10/2007 Smith ..... G01S 5/021<br/> 342/464<br/> 2008/0248813 A1 * 10/2008 Chatterjee ..... G01S 1/68<br/> 455/456.2<br/> 2010/0157899 A1 * 6/2010 Manz ..... H04W 40/20<br/> 370/328<br/> 2010/0325476 A1 * 12/2010 Zhang ..... G06F 11/1662<br/> 714/4.1<br/> 2013/0316740 A1 * 11/2013 Scarafia ..... H04W 4/043<br/> 455/456.5</p> <p>* cited by examiner</p> |
|--|---|

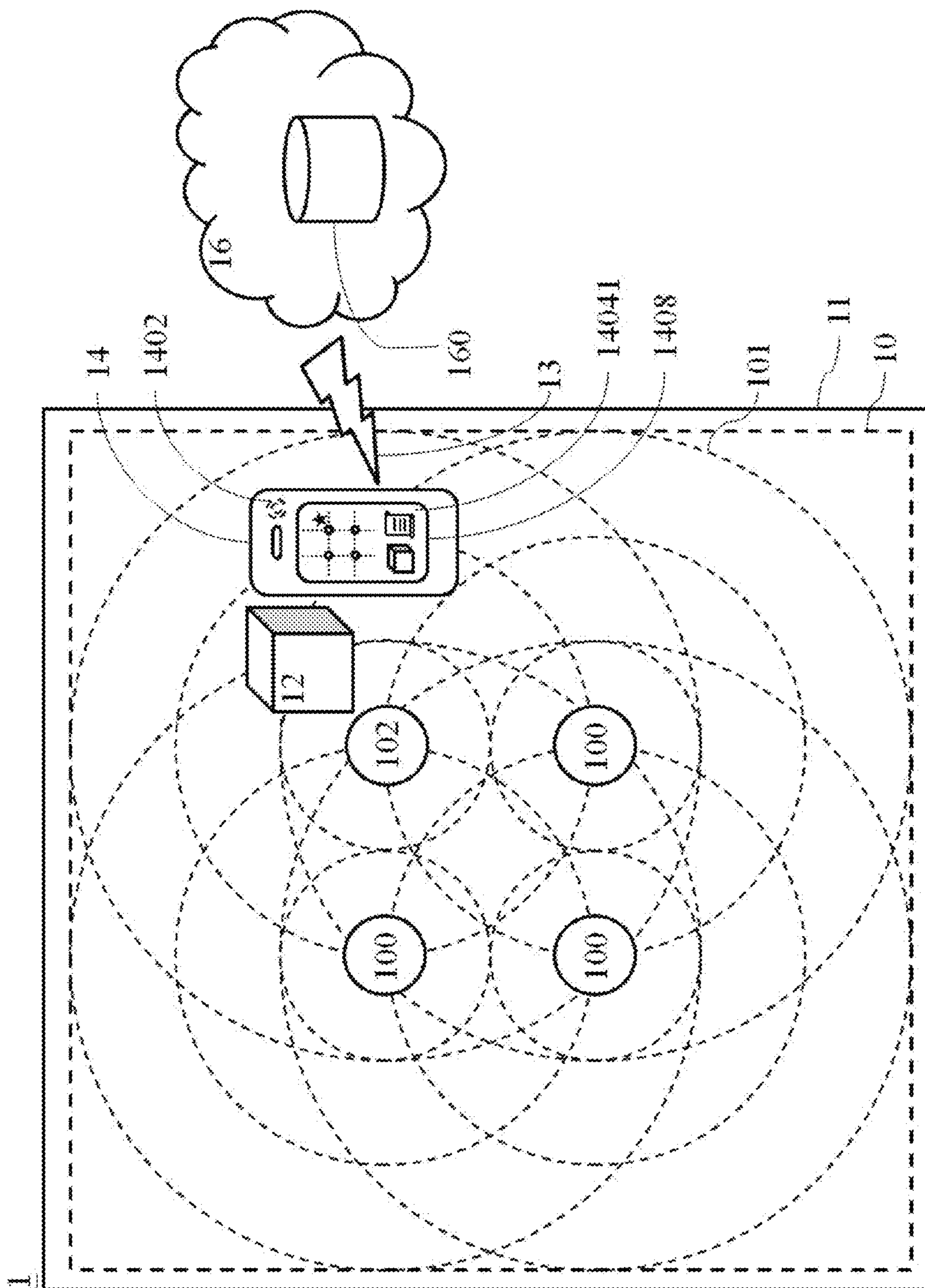


Fig. 1

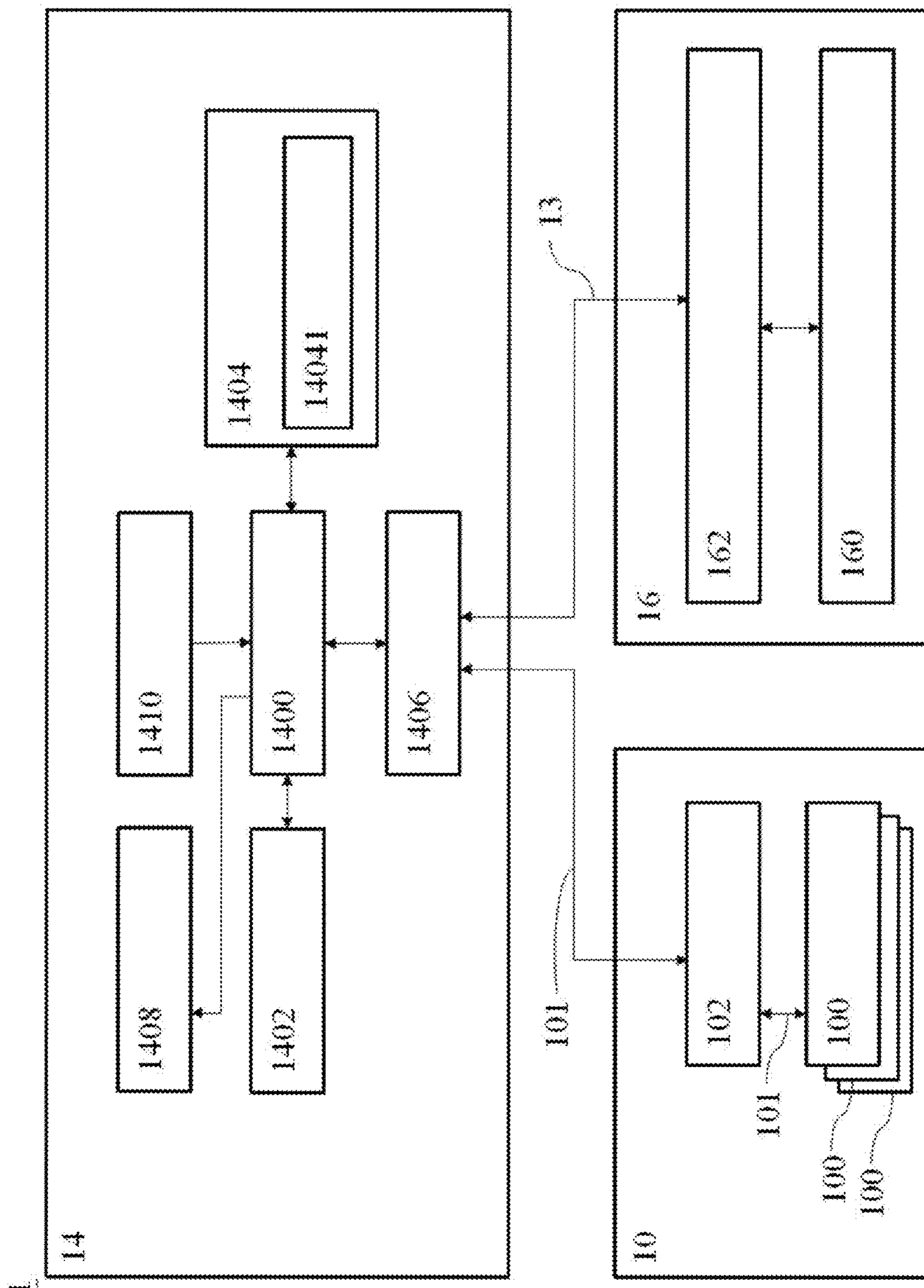


FIG. 2

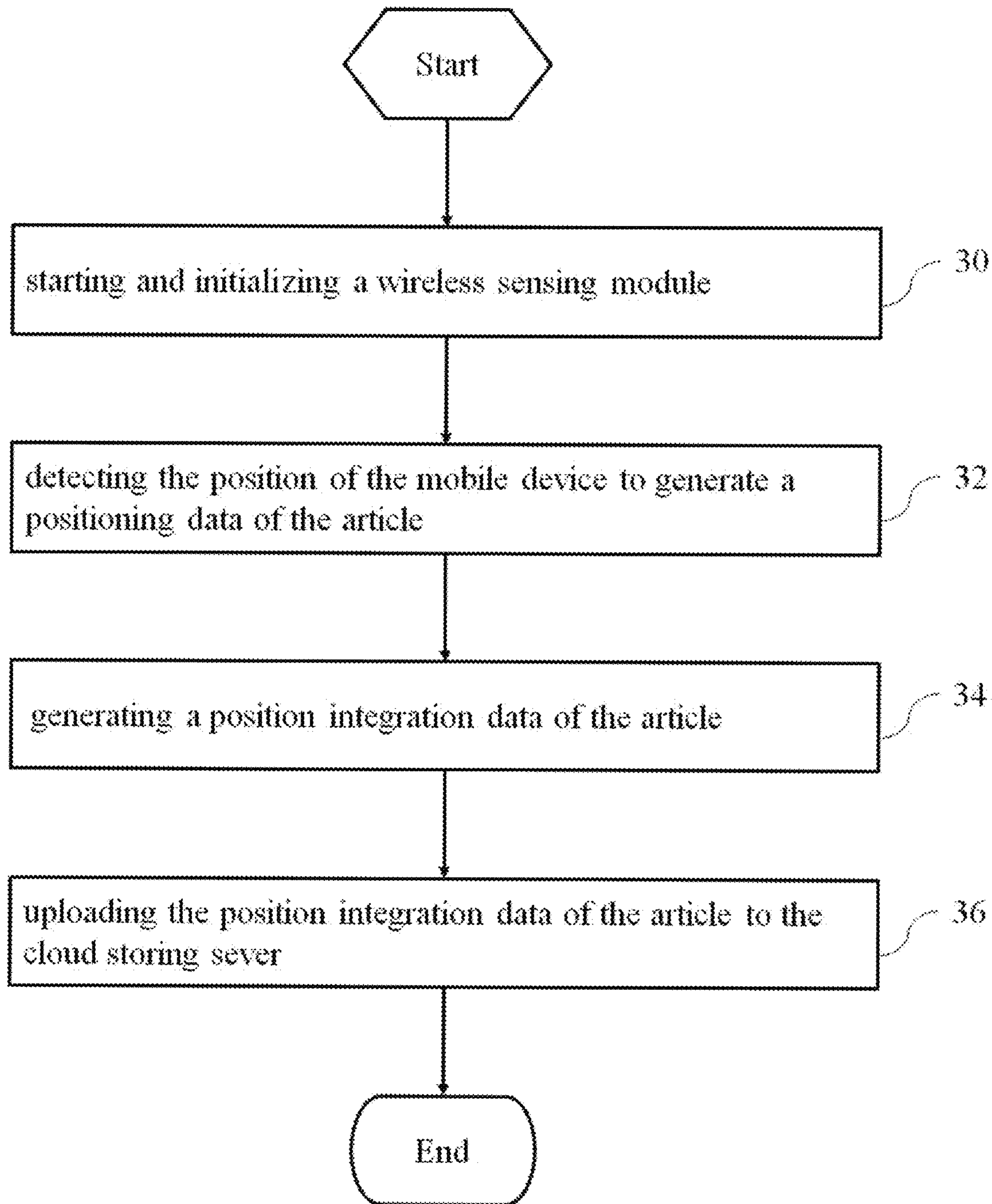


Fig. 3

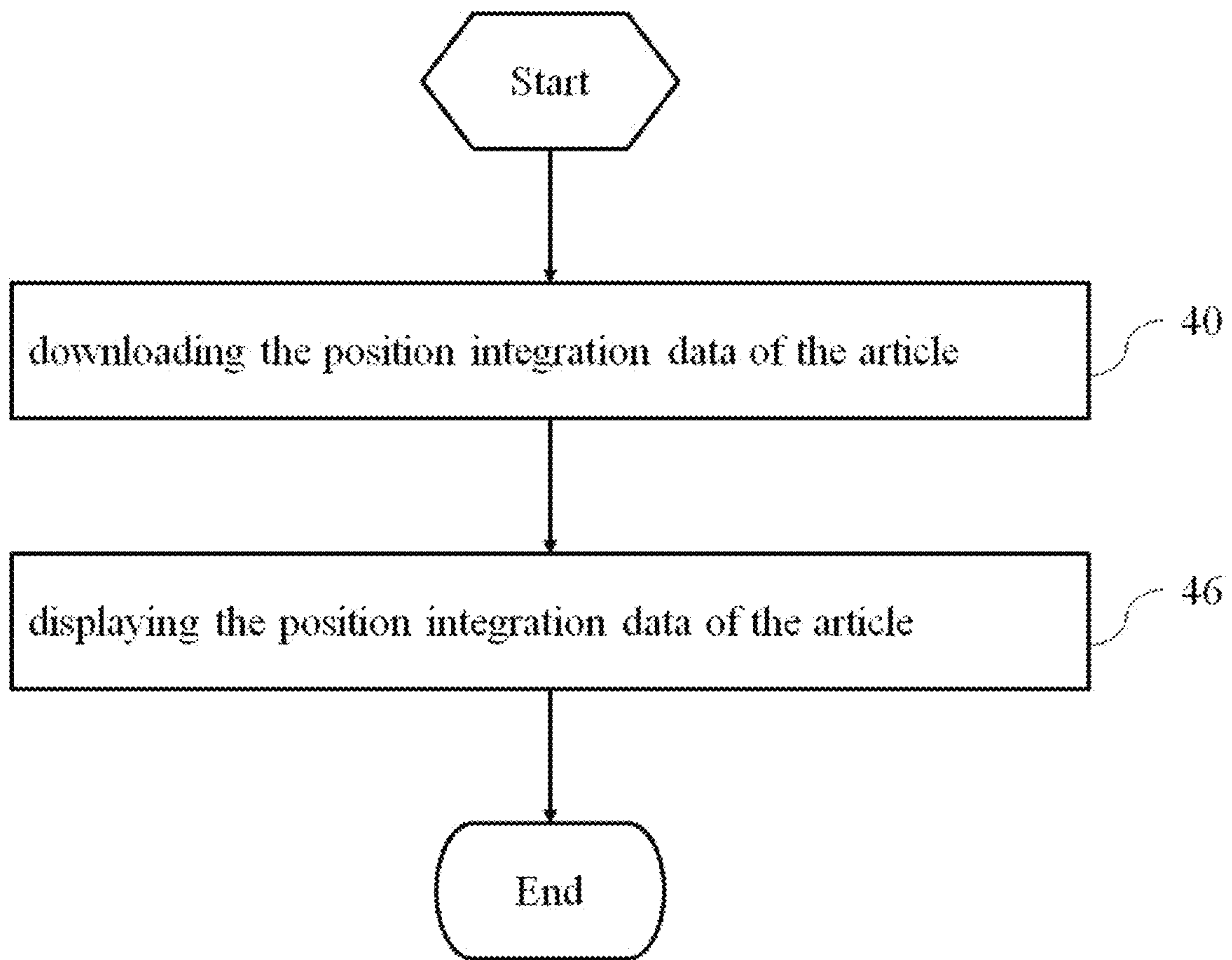


Fig. 4

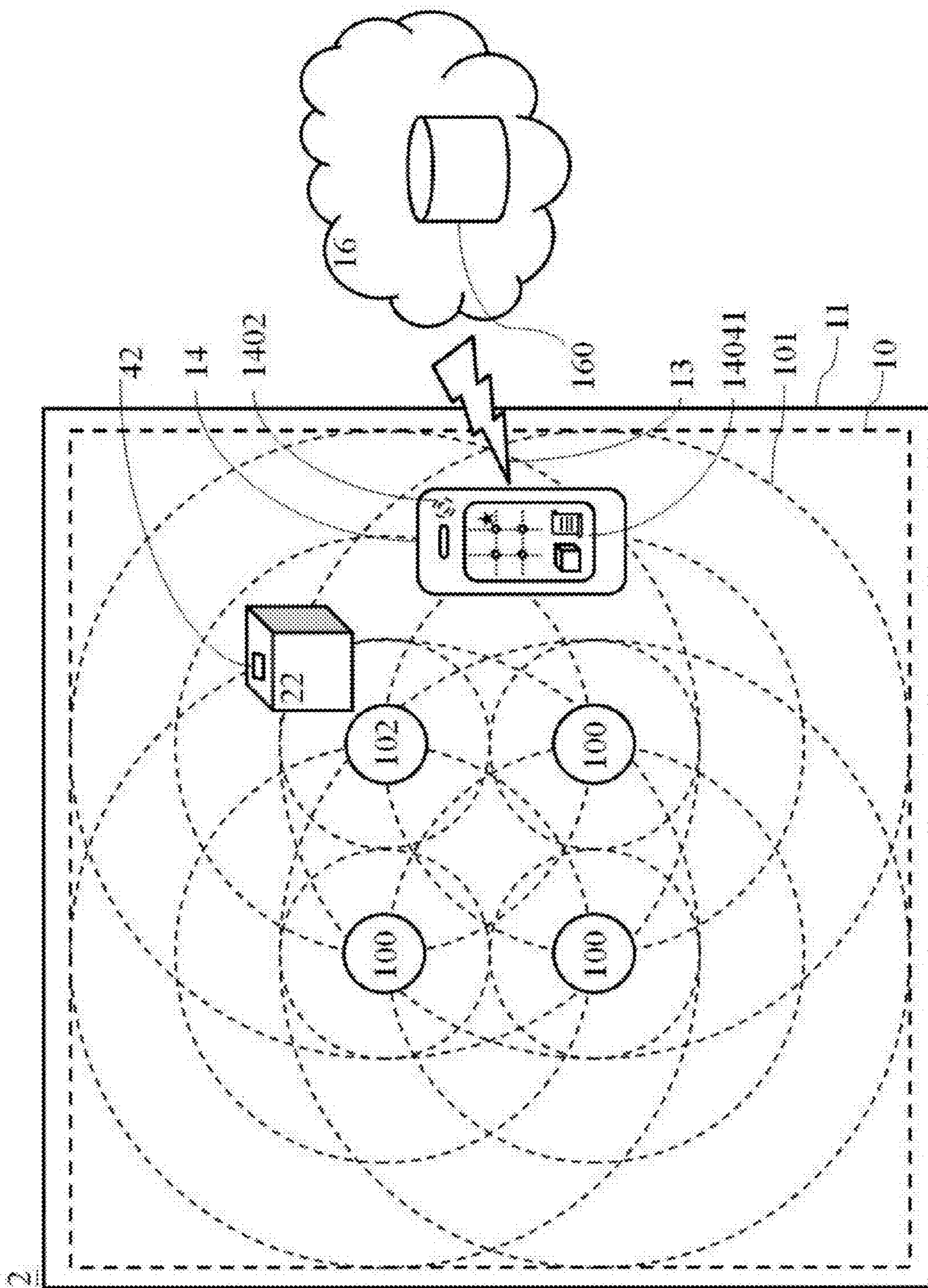


Fig. 5





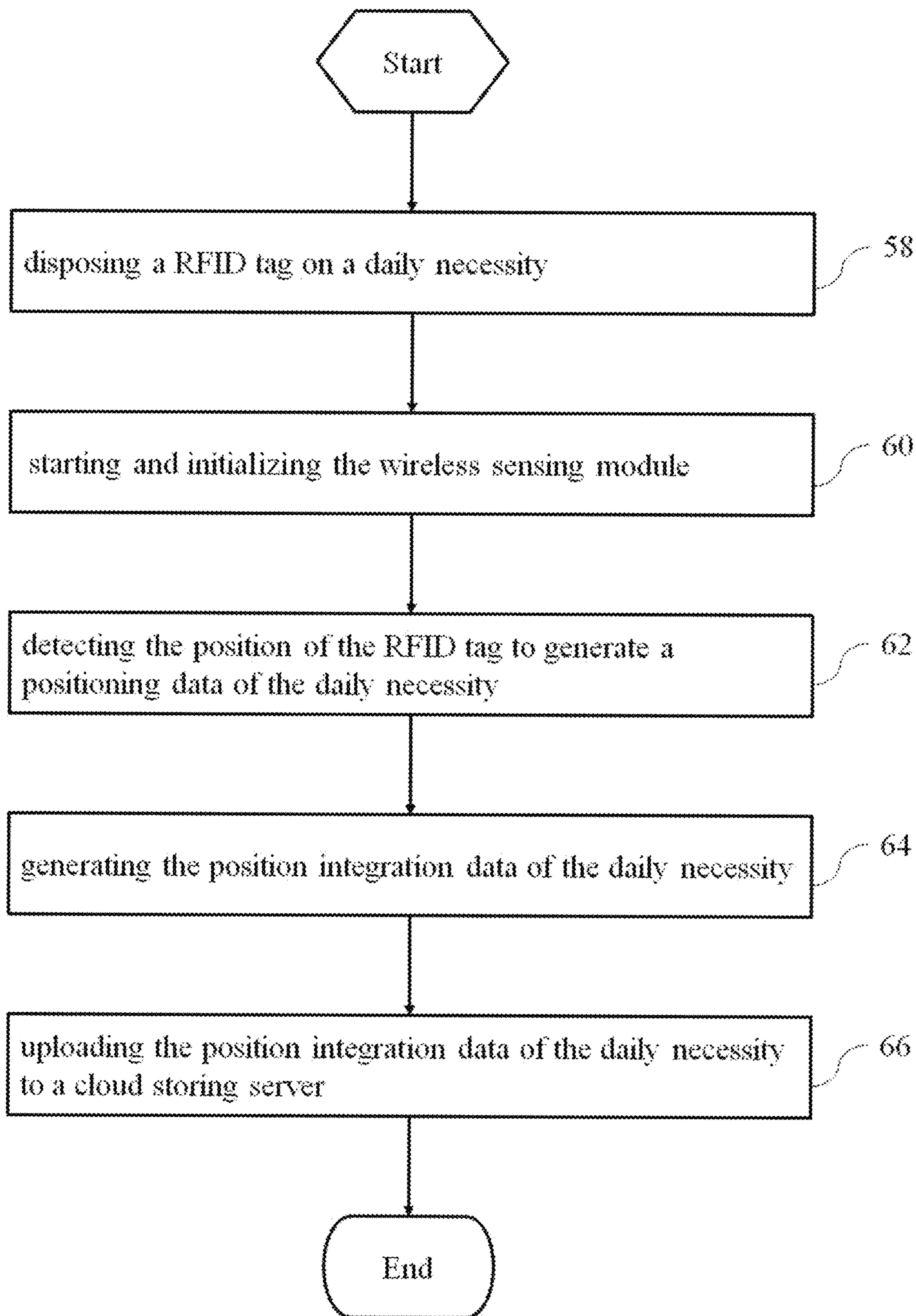


Fig. 7

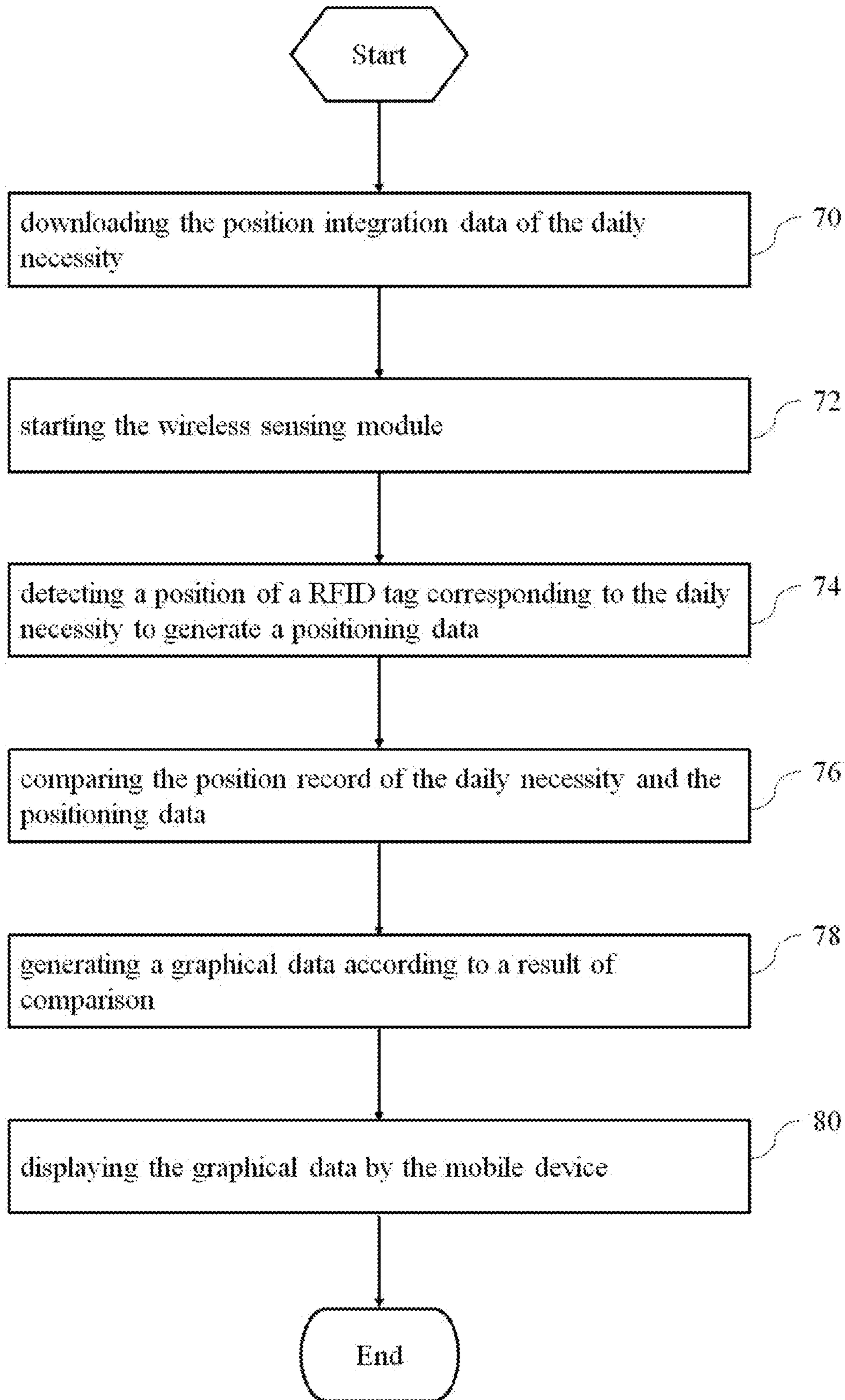


Fig. 8

## SYSTEM FOR MEMORIZING OBJECT LOCATION AND METHOD THEREOF

### FIELD OF THE INVENTION

The present invention relates to a system for memorizing object location and method thereof, in particular to a system for memorizing interior object location with a cloud system.

### BACKGROUND OF THE INVENTION

People may forget where they store an object when the object was stored long time ago and it's really hard to recall to mind. In addition, people may place daily necessities without attention. Both situations make it difficult for people to find the object they want.

On the other hand, an object usually store in a specific room which is only known by the keeper of the object. It's hard for others to find the object when the keeper is not present. To solve the above mentioned problems, the present invention provides a system for memorizing object location and method for people to find objects that are stored in an interior specific room or casually placed somewhere.

### SUMMARY OF THE INVENTION

The present invention provides a system for memorizing object location to detect the storing position of an object, wherein the system includes: a wireless sensing module disposed in interior space to generate a wireless sensing signal; and a mobile device equipped with an application program having a function of obtaining a position of an object within the interior space by utilizing the wireless sensing signal and calculating out a positioning data of the object and generating a position integration data of the object according to the positioning data.

In an embodiment, the mobile device is placed beside the object, and the application program detects the position of the mobile device by utilizing the wireless sensing signal to obtain the position of the object.

In an embodiment, the mobile device further includes an image picking up unit to photograph the object to get an image data which is to be imported into the position integration data of the object via the application program.

In an embodiment, the mobile device further comprises an enter unit to enter an additional text message of the object which is to be imported into the position integration data of the object via the application program.

In an embodiment, the system further includes a RFID tag which is placed on the object and the application program utilizes the wireless sensing signal to detect the position of the RFID tag and to obtain the position of the object.

In an embodiment, the system further includes: a cloud storing server equipped with a memorizing database and connected with the mobile device via a communication link to receive the position integration data of the object and stores the position integration data into the memorizing database.

In an embodiment, the mobile device sends an inquiring request to the cloud storing sever to obtain the position integration data.

In an embodiment, the application program of the system has a function of starting and initializing the wireless sensing module.

The present invention also provides a method for memorizing object location to detect the storing position of an object, including the steps: detecting the position of a mobile

device beside an object by utilizing a wireless sensing module to generate a positioning data of the object; generating a position integration data of the object by utilizing the positioning data; and uploading the position integration data to a cloud storing server.

In an embodiment, before the step of detecting the position of the mobile device beside the object by utilizing the wireless sensing module to generate the positioning data, the method for memorizing object location further includes the step of: starting the wireless sensing module and setting a network topology configuration of the wireless sensing module by the mobile device.

In an embodiment, the method for memorizing object location further includes the steps of: initializing the wireless sensing module by an application program installed in the mobile device.

In an embodiment, the step of generating a position integration data of the object by utilizing the positioning data further comprises the step of: downloading the position integration data of the object by the mobile device; displaying the position integration data of the object by the mobile device.

In an embodiment, the step of generating the position integration data of the object by utilizing the positioning data further includes the steps of: obtaining an image data of the object; and importing the image data into the position integration data.

In an embodiment, the step of generating the position integration data of the object by utilizing the positioning data further comprises the steps of: obtaining an additional text message of the object; and importing the additional text message into the position integration data.

The present invention also provides a method for memorizing object location to detect the storing position of an object, including the steps: detecting a position of a RFID tag on an object by a wireless sensing module to generate a first positioning data of the object; generating a position integration data of the object by utilizing the first positioning data; and uploading the position integration data to a cloud storing server.

In an embodiment, the method of detecting the storing position of an object further includes the steps of: downloading the position integration data to obtain a position record of the object; detecting the position of the RFID tag by the wireless sensing module to generate a second positioning data; and comparing the position record and the second positioning data.

In an embodiment, the method of detecting the storing position of an object further includes the steps of: generating a graphical data according to a result of comparing the position record and the second positioning data; and displaying the graphical data on a mobile device.

In an embodiment, before the step of detecting the position of the RFID tag on the object by the wireless sensing module to generate the first positioning data of the object further includes the step of: starting the wireless sensing module and setting a network topology configuration of the wireless sensing module by a mobile device.

In an embodiment, the method of detecting the storing position of an object further includes the steps of: initializing the wireless sensing module by an application program installed in the mobile device.

In an embodiment, the position integrated data further includes a unique identified code of the RFID tag.

With the system for memorizing object location, users are able to get the position of a stored object by a mobile device connecting a memorizing database.

With the system for memorizing object location and method of the present invention, users can inquire the position of a daily necessity by a mobile device, even the daily necessity is moved to somewhere that users don't know.

#### BRIEF DESCRIPTION OF THE DRAWINGS

The invention will become more fully understood from the detailed description given herein below illustration only, and thus is not limitative of the present invention, and wherein:

FIG. 1 is a schematic diagram of the system for memorizing object location in a first embodiment of the present invention;

FIG. 2 is a systematic block diagram of the system for memorizing object location in the first embodiment of the present invention;

FIG. 3 is a flow chart illustrating the process of uploading the position integration data of the method for memorizing object location in the first embodiment of the present invention;

FIG. 4 is a flow chart illustrating the process of inquiring a stored object according to the method for memorizing object location in first embodiment of the present invention;

FIG. 5 is a schematic diagram of the system for memorizing object location in the second embodiment of the present invention;

FIG. 6 is a systematic block diagram of the system for memorizing object location in the second embodiment of the present invention;

FIG. 7 is a flow chart illustrating the process of uploading daily necessity position integration data of the method for memorizing object location in the second embodiment of the present invention;

FIG. 8 is a flow chart illustrating the process of inquiring a daily necessity according to the method for memorizing object location in the second embodiment of the present invention.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

The present invention will be apparent from the following detailed description, which reference to the accompanying drawings, wherein the same references relate to the same elements. The following paragraphs describe embodiments of the disclosed system for memorizing object location and method of the invention.

First, please refer to FIG. 1. FIG. 1 is a schematic diagram of the system 1 for memorizing object location in the first embodiment of the present invention. As FIG. 1 shows, an object 12 seldom used is stored in a specific space of the interior space 11. A mobile device 14 having an application program 14041 with a function of object position memorizing is placed beside the object 12 when the object 12 is stored. The application program 14041 is further configured to start and initiate a wireless sensing module 10 disposed in the interior space 11. The wireless sensing module 10 includes a plurality of reference node 100, a coordinate node 102 spread randomly in the interior space 11. Wherein the embodiment of wireless sensing module 10 is but not limited to wireless local area network (IEEE 802.11b/g/n, WLAN, Wi-Fi), Zigbee (IEEE 802.15.54), RuBee (IEEE 1902.1), WiBree, Bluetooth, Ultra Wide Band (UWB) or Radio Frequency Identification (RFID), etc. The wireless sensing module 10 has at least the following modules: network

topology configuration, Transmitted Signal Strength Indicator (TSSI), Received Signal Strength Indicator (RSSI), Carrier to Interference plus Noise Ratio (CINR) and interior space 11 arrangement data. The interior space 11 arrangement data can include the arrangement and type of the furniture in the interior space 11. The application program 14041 initializes and uploads the modules of the wireless sensing module 10 to generate a module setting data.

After the application program 14041 has initialized the wireless sensing module 10, the application program 14041 detects the mobile device 14 position by utilizing the wireless sensing signal 101 generated from the reference nodes 100 and the coordinate node 102, and then acquires a positioning data to generate a graphical data corresponding to the positioning data. And then the graphical data is displayed on the display unit 1408 of the mobile device 14. The positioning data can also show the storing position of the object 12 because the mobile device 14 is placed beside the object 12, and the embodiment of the wireless sensing signal 101 is depended on the abovementioned wireless sensing module 10 embodiments. For the positioning data shows the storing position of the object 12, the application program 14041 obtains the storing position of the object 12 when the application program 14041 acquires the positioning data. Besides acquiring the positioning data, user can further utilize an image pickup unit 1402 of the mobile device 14 to acquire an image data by photographing the object 12 or utilize an enter unit of the mobile device 14 to add additional text message via the application program 14041. The application program 14041 generates a position integration data according to module setting document of the wireless sensing module 10, positioning data, image data and additional text message, and then the position integration data is uploaded to a cloud storing sever 16 equipped with a memorizing database 160 through a communication link 13. Users can view the position integration data stored in the memorizing database 160 after the cloud storing sever 16 uploads the position integration data. In addition, users obtain the position integration data by sending an inquiring request to the cloud storing sever 16 with the mobile device 14.

The communication link 13 is but not limited to the following communication protocol: Open System Interconnection Reference Model (OSI), Transmission Control Protocol/Internet Protocol (TCP/IP), Carrier Sense Multiple Access with Collision Detect (CSMA/CD), Point to Point Protocol (PPP), PPP over Ethernet (PPPoE), Cable modem, Local Area Network (LAN), Wide Area Network (WAN), World Wide Web (WWW), NetWare, IPX/SPX, Net BEUI, Apple Talk, Asymmetric Digital Subscriber Loop (ADSL), Public Switched Telephone Network (PSTN), Integrated Services Digital Network (ISDN), Asynchronous Transfer Mode (ATM), WiFi, Bluetooth, Wide band Code Division Multiple Access (WCDMA), Code Division Multiple Access 2000 (CDMA2000), High Speed Package Access (HSPA), Long Term Evolution (LTE), Evolution-Data Optimized (EV DO), Zigbee, Worldwide Interoperability For Access (WIMAX), 3G, General Packet Radio Service (GPRS), Global System for Mobile Communication (GSM).

Please refer to FIG. 2. FIG. 2 is a systematic block diagram of the system for memorizing object location in the first embodiment of the present invention. As FIG. 2 shows, the system 1 for memorizing object location includes a mobile device 14, a wireless sensing module 10 and a cloud storing sever 16; the connections between the units will be described later. The wireless sensing module 10 is constituted by a plurality of reference nodes 100 and a coordinate

## 5

node **102** while each of the reference nodes **100** is connected to the other reference nodes **100** and the coordinate node **102** with wireless sensing signal. The mobile device **14** includes at least a processing unit **1400**, an image picking up unit **1402**, a memorizing unit **1404** storing the application program **14041**, a communication unit **1406**, a display unit **1408** and an enter unit **1410**, meanwhile, the image picking up unit **1402**, memorizing unit **1404**, communication unit **1406**, display unit **1408** and the enter unit **1410** respectively electrical connect to the processing unit **1400**, wherein the coordinate node **102** of the wireless sensing module **10** is connected to the communication unit **1406** of the mobile device **14** with wireless sensing signal **101**. Furthermore, the coordinate node **102** can be either fixedly arranged or initializing function of application program **14041** installed in the mobile device **14**. The coordinate node **102** is generated by changing one of the reference nodes **100** configuration. The cloud storing sever **16** has at least an object position memorizing/inquiring unit **162** to receive the uploaded position integration data through the communication link **13** and to store the position integration data in a memorizing database **160**. The embodiment of the cloud storing server **16** interface can be a website, so that users can visit the website and inquiry the position integration data. In addition, the embodiment of the cloud storing sever **16** is but not limited to group of cloud host, server, personal computer, mobile device, notebook, personal digital assistant, cellular phone or application program.

Please refer to FIG. 3. FIG. 3 is the flow chart of uploading the position integration data of the method for memorizing object location first embodiment of the present invention. As FIG. 3 shows, conducting the method for memorizing object location with the system **1** for memorizing object location shown in the FIGS. 1 & 2 comprises the following steps:

Step **30**: starting and initializing a wireless sensing module **10** by a mobile device **14** and then setting a network topology configuration of the wireless sensing module **10**; wherein the initialization is implemented by an application program **14041** installed in the mobile device **14**.

Step **32**: detecting the position of the mobile device **14** besides an object **12** by utilizing the wireless sensing module **10** to generate a positioning data of the object **12**; wherein the communication unit **1406** acquires the wireless sensing signal **101** generated from a plurality of reference nodes **100** or a coordinate node **102** to acquire the position of the mobile device **14**, and then the application program **14041** generates the positioning data according to the mobile device **14** position.

Step **34**: generating a position integration data of the object **12** by utilizing the positioning data; in an embodiment, the application program **14041** further obtains an image data of the object and then importing the image data into the position integration data; in another embodiment, the application program **14041** further obtains an additional text message of the object and then importing the additional text message into the position integration data; in another embodiment, the application program **14041** generates position integration data of the object **12** according to the module setting document, the positioning data, the image data and the additional text message of the wireless sensing module **10**.

Step **36**: uploading the position integration data of the object **12** to the cloud storing sever **16**; wherein the position integration data of the object **12** is uploaded to a cloud storing sever **16** through the communication link **13** and is stored in the memorizing database **160**.

## 6

Please refer to FIG. 4. FIG. 4 is the flow chart of inquiring an object with the method for memorizing object location first embodiment of the present invention. As FIG. 4 shows, inquiring object position with the system **1** for memorizing object location shown in FIGS. 1 & 2 comprises the following steps:

Step **40**: downloading the position integration data of the object **12** by the mobile device **14**; wherein the mobile device sends an inquiring request to the cloud storing sever **16** through the communication link **13**. The object position memorizing/inquiring unit **162** then generates an inquiring result which can be position integration data about one or a plurality of object, and then the object position integration data is download by the mobile device **14** through the communication link **13**. In addition, the mobile device is but not limited to a server, a Personal Computer, a Notebook, a Personal Digital Assistant, or a cellular phone.

Step **46**: displaying the position integration data of the object **12** by the mobile device **14**; wherein the application program **14041** of the mobile device **14** displays the position integration data downloaded from the cloud storing sever **16** on the display unit **1408** of the mobile device **14**. Furthermore, the position integration data includes positioning data, image data and additional text message.

Please refer to FIG. 5. FIG. 5 is a schematic diagram of the system **2** for memorizing object location second embodiment of the present invention. As FIG. 5 shows, a Radio Frequency Identification (RFID) tag **42** with a unique identified code is installed on a daily necessity **22** so that a particular RFID tag **42** can be identified from a plurality of RFID tags **42**. For the wireless sensing module **10** of FIG. 5, the arrangement in the interior space **11** and the connection relationship with the mobile device **14** are the same as that of FIG. 1, and it is not to be described herein.

The application program **14041** detects the position of the RFID tag **42** to acquire a positioning data according to the wireless sensing signal **101** generated from the reference nodes **100** or the coordinate node **102** after the application program **14041** has done the initialization. A graphical data corresponding to the positioning data is then generated and displayed on the display unit **1408** of the mobile device **14**. The positioning data shows the position of the daily necessity **22** because the RFID tag **42** is installed on the daily necessity **22**. For the positioning data shows the position of daily necessity **22**, the application program **14041** obtains the position of daily necessity **22** when the application program **14041** acquires the positioning data. In addition, the embodiment of the wireless sensing signal **101** is depended on the abovementioned wireless sensing module **10** embodiments. Besides the positioning data, users can photograph the daily necessity **22** to acquire an image data by the image picking up unit **1402** of mobile device **14** and add additional text message by the mobile device **14**. According to the generated module setting and positioning data from the wireless sensing module **10**, the image data, the additional text message and the unique identified code of the RFID tag **42**, the application program **14041** generates a position integration data and then uploads the position integration data to a cloud storing sever **16** through a communication link **13**. The cloud storing server **16** analyzes the uploaded position integration data and then stores it in a memorizing database **160** so that users can inquire the uploaded data.

Please refer to FIG. 6. FIG. 6 is a systematic block diagram of the system **2** for memorizing object location second embodiment of the present invention. As FIG. 6 shows, the system for memorizing object location **2** com-

prises a mobile device 14, a wireless sensing module 10, a cloud storing server 16 and a RFID tag 42, wherein the wireless sensing module 10 detects the RFID tag 42 with the wireless sensing signal 101, which also makes the application program 14041 generate a positioning data. For the arrangement and the connection relationships about the other units are the same as the system for memorizing object location 1 shown in FIG. 2, it is not to be described herein.

Please refer to FIG. 7. FIG. 7 is the flow chart of uploading daily necessity position integration data of the method for memorizing object location second embodiment of the present invention. As FIG. 7 shows, conducting the method for memorizing object location with the system 2 for memorizing object location shown in FIG. 5, 6 comprises the steps:

Step 58: placing a RFID tag 42 on a daily necessity 22.

Step 60: starting and initializing the wireless sensing module 10 by the mobile device 14 which includes setting the network topology configuration of the wireless sensing module 10; wherein the mobile device 14 initializes the wireless sensing module 10 by the application program 14041.

Step 62: detecting the position of the RFID tag 42 by the wireless sensing module 10 and the mobile device 14 generating a first positioning data of the daily necessity 22; wherein the RFID tag 42 receives the wireless sensing signal 101 generated from the reference nodes 100 or coordinate node 102, the mobile device 14 then detects the position of the RFID tag 42 by the communication unit 1406. The application program 14041 computes the first positioning data with the RFID tag 42 position.

Step 64: generating the position integration data of the daily necessity 22 by utilizing the first positioning data of the daily necessity 22; wherein the application program 14041 generates the position integration data of the daily necessity 22 according to a module setting data of the wireless sensing module 10 generated from the application program 14041, the first positioning data, an image data, an additional text message and the unique identified code of the RFID tag 42.

Step 66: uploading the position integration data of the daily necessity 22 to a cloud storing server 16; wherein the integration data of the daily necessity is uploaded to the cloud storing server 16 through the communication link 13 and then is stored in the memorizing database 160.

Please refer to FIG. 8. FIG. 8 is the flow chart of inquiring a daily necessity of the method for memorizing object location second embodiment of the present invention. As FIG. 8 shows, conducting the wireless sensing module 10, the RFID tag 42 on the daily necessity 22, the mobile device 14 and the cloud storing server 16 shown in FIGS. 5 & 6 to inquire an object comprises the steps of:

Step 70: downloading the position integration data of the daily necessity 22 to obtain a position record of the daily necessity 22; wherein the mobile device 14 sends the inquiry via the communication link 13, an object position memorizing/inquiring unit 162 of the cloud storing sever 16 generates a inquiring result according to the inquiry, and the inquiring result is download to the mobile device 14 via the communication link 13. In an embodiment, the inquiring result is a position integration data of an object or a group of objects.

Step 72: starting the wireless sensing module 10 by the mobile device 14; wherein the application program 14041 of the mobile device 14 starts the wireless sensing module 10 in the interior space 11 with the module setting data of the wireless sensing module 10 of the downloaded position integration data.

Step 74: detecting a position of a RFID tag 42 corresponding to the daily necessity 22 by the mobile device 14 to generate a second positioning data; wherein the application program 14041 detects the RFID tag 42 by the wireless sensing signal 101 to acquire the second positioning data; the wireless sensing signal 101 is generated by the wireless sensing module 10.

Step 76: comparing the position record of the daily necessity 22 and the second positioning data.

Step 78: generating a graphical data according to a result of comparing the position record of the daily necessity 22 and the second positioning data; if the comparison result is identical, the graphical data is about the record position of the daily necessity 22; if the comparison result is not identical which means the position of the daily necessity 22 is changed, a information of changed position of the daily necessity 22 must be imported into the graphical data.

Step 80: displaying the graphical data by the mobile device 14.

FIG. 1-4 show the system for memorizing object location and method of the present invention first embodiment. The first embodiment of the present invention is to obtain a stored position of an object 12 seldom used, for example, an object 12 is useful in a part of a year and is useless in the rest of the year, as a result, the object 12 will not be moved when it is stored. With the system for memorizing object location, users can inquire the position integration data from memorizing database 160 of the cloud storing server 16 by the mobile device 14, and then users can to get the stored position of the object 12.

FIG. 5-8 show the system for memorizing object location and method of the present invention second embodiment. The second embodiment of the present invention is to obtain a position of a daily necessity 22 used and moved usually, for example, remote controller and drug. After setting a RFID tag 42 on a daily necessity 22, users can inquire the position integration data from memorizing database 160 of the cloud storing server 16 by the mobile device 14, and the users can get the position of the daily necessity 12.

Although the invention has been described with reference to the preferred embodiments, this description is not meant to be construed in a limiting sense. It is apparent to those skilled in the art that a variety of modifications and changes may be made without departing from the scope of the present invention which is intended to be defined by the appended claims.

What is claimed is:

1. A system for memorizing object location, comprising:
  - a wireless sensing module disposed in an interior space to generate a wireless sensing signal, wherein the wireless sensing module includes a plurality of reference nodes and a coordinate node, wherein the coordinate node is generated by changing a configuration of one of the plurality of reference nodes, and wherein the wireless sensing signal is generated from the plurality of reference nodes and the coordinate node; and
  - a mobile device equipped with an application program initializing the wireless sensing module, the mobile device obtaining a position of an object within the interior space by utilizing the wireless sensing signal and calculating positioning data of the object and generating a position integration data of the object according to the position data,
  - wherein the mobile device is placed beside the object and the application program detects the position of the mobile device by utilizing the wireless sensing signal,

9

thereby obtaining positioning data of the object, the positioning data of the object being a storing position of the object, and

wherein the reference nodes and coordinate node are randomly spread throughout the interior space.

2. The system of claim 1, wherein the mobile device further comprises an image pickup unit to photograph the object to get an image data which is to be imported into the position integration data of the object via the application program.

3. The system of claim 1, wherein the mobile device further comprises an enter unit to enter an additional text message of the object which is to be imported into the position integration data of the object via the application program.

4. The system of claim 1, further comprises a RFID tag which is placed on the object and the application program utilizes the wireless sensing signal to detect the position of the RFID tag and to obtain the position of the object.

5. The system of claim 1, further comprising:  
a cloud storing server equipped with a memorizing database and connected with the mobile device via a communication link to receive the position integration data of the object and stores the position integration data into the memorizing database.

6. The system of claim 5, wherein the mobile device sends an inquiring request to the cloud storing server to obtain the position integration data.

7. The system of claim 1, wherein the application program further has a function of starting the wireless sensing module.

8. A method for memorizing object location, comprising the steps of:

initializing a wireless sensing module by an application program installed in a mobile device;

detecting a position of the mobile device located beside an object by utilizing the wireless sensing module to generate a positioning data of the object, wherein the positioning data of the object is a storing position of the object, wherein the wireless sensing module includes a plurality of reference nodes and a coordinate node spread randomly throughout an interior space, wherein the coordinate node is generated by changing a configuration of one of the plurality of reference nodes;

generating a position integration data of the object by utilizing the positioning data; and

uploading the position integration data to a cloud storing server.

9. The method of claim 8, wherein before the step of initializing a wireless sensing module by an application program installed in a mobile device, the method further comprising the step of:

starting the wireless sensing module and setting a network topology configuration of the wireless sensing module by the mobile device.

10. The method of claim 8, wherein the step of generating a position integration data of the object by utilizing the positioning data further comprising the step of:

10

downloading the position integration data of the object by the mobile device;

displaying the position integration data of the object by the mobile device.

11. The method of claim 8, wherein the step of generating the position integration data of the object by utilizing the positioning data further comprises the step of:

obtaining an image data of the object; and  
importing the image data into the position integration data.

12. The method of claim 8, wherein the step of generating the position integration data of the object by utilizing the positioning data further comprises the steps of:

obtaining an additional text message of the object; and  
importing the additional text message into the position integration data.

13. A method for memorizing object location, comprising the steps of:

initializing a wireless sensing module by an application program installed in a mobile device;

detecting a position of a RFID tag on an object by the wireless sensing module to generate a first positioning data of the object, where the first positioning data of the object is a storing position of the object, wherein the wireless sensing module includes a plurality of reference nodes and a coordinate node spread randomly throughout an interior space, and wherein the coordinate node is generated by changing a configuration of one of the plurality of reference nodes;

generating a position integration data of the object by utilizing the first positioning data; and

uploading the position integration data to a cloud storing server.

14. The method of claim 13, further comprising the steps of:

downloading the position integration data to obtain a position record of the object;

detecting the position of the RFID tag by the wireless sensing module to generate a second positioning data; and

comparing the position record and the second positioning data.

15. The method of claim 14, further comprising the steps of:

generating a graphical data according to a result of comparing the position record and the second positioning data; and

displaying the graphical data on a mobile device.

16. The method of claim 13, wherein before the step of initializing a wireless sensing module by an application program installed in a mobile device further comprising the step of:

starting the wireless sensing module and setting a network topology configuration of the wireless sensing module by a mobile device.

17. The method of claim 13, wherein the position integration data further includes a unique identified code of the RFID tag.

\* \* \* \* \*